

Claims

- [c1] 1. An automotive vehicle, comprising:
- a passenger cabin being generally symmetrical about a longitudinal center plane;
 - a floorpan defining a lower structural surface of said passenger cabin;
 - a first seat mounted to said floorpan , with said seat extending laterally across at least a portion of said passenger cabin, with said seat having a frame and an outboard end;
 - a side closure structure adjoining said outboard end of said seat; and
 - a seat displacement member, located within said side closure structure, for impacting said outboard end of the seat, so as to deform said seat frame and move said seat laterally inward with respect to said longitudinal center plane in the event of an impact load directed laterally against said closure structure, such that the pelvic region of an occupant of said seat will be the first region of the occupant to be dynamically loaded by said side closure structure.
- [c2] 2. An automotive vehicle according to Claim 1, wherein

said seat frame comprises a seat riser interposed between a cushion portion of the seat and said floorpan.

- [c3] 3. An automotive vehicle according to Claim 2, wherein said seat displacement member impacts upon said seat riser.
- [c4] 4. An automotive vehicle according to Claim 2, wherein said seat displacement member impacts upon both said seat riser and an outboard end of said seat cushion.
- [c5] 5. An automotive vehicle according to Claim 1, further comprising a second seat, extending laterally across a portion of said cabin not occupied by said first seat, with said first and second seats being separated laterally such that displacement of said first seat resulting from an impact by said seat displacement member upon said first seat will cause said first seat to move laterally closer to said second seat.
- [c6] 6. An automotive vehicle according to Claim 1, wherein said seat displacement member further functions to prevent inner and outer panels of said closure structure from collapsing upon one another in the region of said seat displacement member in response to a laterally directed impact load.
- [c7] 7. An automotive vehicle according to Claim 1, wherein

said closure structure comprises a door.

[c8] 8. An automotive vehicle according to Claim 1, wherein said closure structure comprises a quarter panel.

[c9] 9. An automotive vehicle according to Claim 1, further comprising a pelvis pusher block mounted within said closure structure above the region in which said seat displacement member is mounted, such that a portion of said closure structure backed by said pelvis pusher block will be the first portion of said side closure structure to contact an occupant seated in said first seat.

[c10] 10. An automotive vehicle, comprising:
a passenger cabin being generally symmetrical about a longitudinal center plane;
a floorpan defining a lower structural surface of said passenger cabin;
a first seat mounted to said floorpan upon a riser, with said seat extending laterally across at least a portion of said passenger cabin, with said seat having a frame and an outboard end;
a side closure structure adjoining said outboard end of said seat; and
a seat displacement member, located within said side closure structure, for impacting said outboard end of the seat, so as to deform said seat frame and said floorpan

and move said seat laterally inward with respect to said longitudinal center plane in the event of a laterally directed impact load against said closure structure, such that the pelvic region of an occupant of said seat will be the first region of the occupant to be dynamically loaded by said side closure structure.

[c11] 11. An automotive vehicle according to Claim 10, wherein the pelvic region of said occupant will be the first region of the occupant to be contacted by said side closure structure.

[c12] 12. An automotive vehicle according to Claim 10, wherein said seat displacement member comprises a rigid block-like structure operatively attached to at least one exterior panel of said side closure structure.

[c13] 13. An automotive vehicle according to Claim 12, wherein said seat displacement member comprises a metallic block.

[c14] 14. An automotive vehicle according to Claim 12, wherein said seat displacement member comprises a bracket.

[c15] 15. An automotive vehicle according to Claim 12, wherein said seat displacement member comprises a resin block.

- [c16] 16. An automotive vehicle according to Claim 12, wherein said seat displacement member comprises an outboard block and an inboard block, with a window glass clearance space extending between said outboard and inboard blocks.
- [c17] 17. A method for managing an impact load directed laterally against the passenger compartment of an automotive vehicle, comprising the sequential steps of:
reacting initially to said impact load by permitting partial deformation of a side closure structure having inner and outer panels, while preventing the side closure structure from collapsing internally;
laterally displacing an occupant seat located within said passenger compartment, by impact loading the seat with a seat displacement member extending between the partially deformed inner and outer panels of said side closure structure; and
causing an initial dynamic loading of an occupant of the seat by contacting the pelvic region of the occupant with the partially deformed inner panel of the side closure structure.
- [c18] 18. A method according to Claim 17, wherein the occupant is contacted by a portion of the inner panel which is located above the portion of the inner panel which con-

tacts said seat during lateral displacement of the seat.

[c19] 19. A method for managing an occupant of a motor vehicle in the event of an impact load directed laterally against a passenger compartment of the vehicle, comprising the steps of:

laterally displacing a seat occupied by said occupant, without laterally displacing said occupant, by impacting a cushion portion of the seat with a seat displacement member located within a side closure structure of said vehicle; and

following the lateral displacement of said seat, laterally displacing the occupant by contacting the pelvic region of the occupant with an interior surface panel of said side closure structure.